

MEDICAL EDUCATION DIGEST



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Assessing the Value of Simulation Learning for Patients with Health Conditions

As the number of patients with multiple health conditions increases, it is time to support those patients and family caregivers in learning how to participate better in their health care to improve health outcomes, reduce hospitalization, reduce health care costs, and increase compliance. While family caregivers report that they perform medical tasks, nursing tasks, or both, they receive little assistance or training from health care professionals.

The North Mississippi Health System pioneered an in-hospital simulation experience for patients with heart failure called Self-Care College. A skilled nursing facility in New Mexico implemented a program called Return Demonstration in which nurses or therapists teach patients and family caregivers, evaluating the patients' performance and proficiency.

Programs that use simulations in a relatively homogeneous class of medical students are simpler than working with diverse populations that demonstrate multiple chronic illnesses. In addition, simulation experiences in a health

care setting may approximate but not reproduce the conditions displayed in the home environment. However, health care professionals may resist providing such training to patients or their caregivers because of lack of time or the concern that such activities are not recognized or compensable.

In January 2013, Medicare began offering billing codes that provide rewards for such activities. The Hospital Consumer Assessment of Healthcare Providers Systems (HCAHPS)—a hospital tool for patient care—now provides scores that determine the financial reward or penalty under the value-based purchasing program. The HCAHPS program acts as a tool to address the extent to which patients feel prepared for self-care following hospital discharge.

(Coleman EA. Extending simulation learning experiences of patients with chronic health conditions. JAMA; December 16, 2013.)



Pilot Survey Shows Low Percentage of Disaster Curricula Offerings in Medical Education

There is documented evidence that medical students do not believe they have received adequate training for responding to disasters. A pilot study was developed to determine the inclusion of disaster medicine in required coursework of medical students at schools in the United States, and to identify its content.

The survey was conducted by the Department of Emergency Medicine of The Johns Hopkins Hospital and addressed the inclusion of disaster medicine in the curricula of the 29 medical schools that responded. The survey was a response to the Association of American Medical Colleges' recommendations that disaster medicine be an integral part of the medical school curriculum.

Of the medical schools that completed the survey, 31 percent incorporated disaster medicine into their medical school curricula. Of those schools that included disaster medicine in their curricula, 20.7 percent offered disaster material as required coursework, and 17.2 percent offered it as elective coursework. Disaster medicine topics provided at the highest frequency included pandemic influenza/severe acute respiratory syndrome (SARS, 27.5 percent) and principles of triage (10.3 percent). The disaster health competency included most frequently was the ability to recognize a potential critical event and implement actions at eight (27.5 percent) of the responding schools.

The study concluded that only a small percentage of U.S. medical schools currently include disaster medicine in their core curriculum, and even fewer medical schools have incorporated or adopted competency-based training within their disaster medicine lecture topics and curricula.

(Smith J, Levy MJ, Hsu EB, Levy J. Disaster curricula in medical education: pilot survey Prehosp Disaster Med. 27(5):492-4. Oct. 2012.)

Educators Focus on Ways to Match Medical Education with Future Health Care Needs

A meeting at Stanford University with a group of health care leaders addressed questions about whether the duration, sequencing, and requirements of medical education are appropriate to meet current and future challenges to medical care. The meeting's report reminds us that today more patients seek care for chronic conditions than for acute diseases and disorders. Inpatient care in 2011 made up only half of what it was in 1981, yet physician training is still heavily based on the acutely ill inpatient.

The rapidly growing older population (soon to be 40 million people over age 65) usually presents with a different mix of symptoms and syndromes, with different risks and responses to a variety of medications. As a result of the Affordable Care Act, increased coverage would likely place burdens on states, organizations, and providers without a parallel increase in health care personnel to treat patients. To keep patients healthier at lower cost, the team approach to health care is advocated and includes a greater reliance on physician extenders.

The number of residents choosing primary care specialties has steadily declined since 1997. Compared to 1950 when 4.4 percent of the U.S. gross domestic product (GDP) was devoted to health care, today it accounts for 17.9 percent of the GDP. The technology required in medical practice has expanded dramatically in the past several decades, and it is likely to continue to do so. This is especially challenging to older physicians, even with many continuing medical education programs being available. The authors of the

report recommend that medical education be restructured to prepare physicians better for a team approach to patient care. Such training would be best done in clinical settings rather than in the classroom. An example cited is the Clinical Excellence Research Center at Stanford. Another point shared by the authors described the length of medical training, which contributes to workforce shortages, higher costs, and physician burnout.

The authors suggest that some physician training be shortened by 30 percent—a change that can be done without compromising quality. A cited example includes the option of selecting some undergraduates for medical school after two or three years of undergraduate school rather than the customary four. With fewer physicians entering geriatrics fellowship training while the number of older people escalates, integrating such training in basic medical education would better meet the needs of the population.

An unmet need for mid- and late-career education with retraining, remediation, and competency assessment should be considered. While provocative, the authors said medical education as currently structured is one size fits all and results in physicians who are not well prepared for the realities of practice. The authors also note the last revolution in the structure of medical education was the 1910 Flexner Report and suggest a new revolution is due.

(Pershing S and Fuchs VR. Restructuring medical education to meet current and future health care needs. Academic Medicine. 88:1798-1801; 2013.)



Increase in Medical Schools and Students Currently Insufficient in Solving Problem of Physician Shortages

According to the Association of American Medical Colleges (AAMC), the failure of Congress to raise caps on residency funding will result in a serious shortage of physicians in spite of record numbers of medical school applicants in 2012 and 2013. The cap on residency funding has not been modified in 16 years, restricting the ability of hospitals to develop or expand new programs. Darrell Kirch, M.D., AAMC president and chief executive officer, said if the residency cap is not lifted, there could be serious physician shortages geographically and across specialties, resulting in a national crisis.

Last year, there were 48,014 applicants to medical schools (6.1 percent more than the previous year and the largest number since 1996), with the number of first-year enrollees at an all-time high of 20,055 even though they face staggering debt and the possibility that there will be no residency position available to them. Within two years, Dr. Kirch stated, there will be fewer res-

idency positions than graduates. The average debt of medical school graduates is \$176,000, Dr. Kirch said.

In 2013, a significant number of new medical school graduates did not match to a residency program, Dr. Kirch added. By 2015, there will be a shortage of 60,000 physicians and 90,000 by the end of the decade, said Atul Grover, M.D., chief public policy analyst for the AAMC. This is complicated by the shortages that already exist in rural and underserved urban areas. Dr. Kirch emphatically stated that several new medical schools that opened in 2013 will not alleviate the shortage of physicians unless there is a corresponding increase in residency positions.

(Broder J. Record number of med students, but more needed to help physician shortage. www.medscape.com/viewarticle/813306; October 29, 2013.)

New 2015 MCAT Seeks to Attract Varied Academic and Demographic Backgrounds

A new version of the Medical College Admissions Test (MCAT) will be launched in the spring of 2015 with greater emphasis on critical reasoning skills and the ability to apply knowledge to practice in diverse settings. The new examination is designed to test applicants in their use of knowledge of the natural, social, and behavioral sciences to solve problems calling for scientific reasoning.

The updated exam signals a focus on the foundational competencies required of future physicians rather than on specific undergraduate courses. It also intends to inform medical school applicants that they must be able to think and learn like scientists. An additional section will be added regarding the critical role of behavioral and social determinants of health. The new MCAT's most important aspect aims to alert future physicians of their need to have broader skills and knowledge than in the past, by balancing the natural sciences with the social and behavioral sciences. The exam hopes to make medical school more attractive to those from more varied academic and demographic backgrounds. The MCAT will include four sections, each weighted equally:

- Biological and Biochemical Foundations of Living Systems
- Physical Foundations of Living Systems
- Critical Analysis and Reasoning Skills
- Psychological, Social, and Biological Foundations of Behavior

A competency-based examination, it calls on baccalaureate faculty members to develop competency-based courses to prepare medical school applicants efficiently for the MCAT, as already is being done at Harvard University, Purdue University, the University of Texas, the University of Maryland, and elsewhere. This should result in broader academic options for applicants, providing them with more freedom in how they structure their coursework and encouraging potential medical students to study areas they had thought were peripheral to medical school preparation.

(Kirch DG, Mitchell K, and Ast C. The new 2015 MCAT: testing competencies. JAMA. 310 (21), 2243-2244; 2013.)

New Sessions Offer Training in Giving Patients Bad News



Medical students at the University of Miami Miller School of Medicine receive a two-hour, interactive, small-group session as an introduction to breaking bad news to patients. Students participate in role-plays in which one student is the doctor, one the patient, and the other an observer. Participants have the opportunity to interact in each of these roles. The case used in the session focuses on a patient newly diagnosed with pancreatic cancer and is written in three parts:

- The patient receives the initial diagnosis of pancreatic cancer.
- The patient has undergone the first cycle of chemotherapy and radiation treatments with some complications.
- The tumor has spread and death is imminent.

The ideal group size is 6 to 12 students with one facilitator per 6 students. Each session focuses on basic communication and the experience of emotion rather than on the medical details. Initially, the session was included in the first year of the curriculum, but facilitators felt it was too difficult for students and placed it in the last half of the second year when students had more comfort with medical terminology and interviewing.

The sessions were also used in the geriatrics fellows' curriculum and found to be appropriate. Adding a caregiver such as a spouse or adult child was recommended to strengthen the program. The caregiver could add the dimension of disagreeing with the patient or blaming the doctor. Another suggestion included a self-reflection section. Additional proposals suggested a health professional or advanced trainee from other disciplines be used, since they could effectively facilitate the session. New facilitators should be provided with a 30 to 60 minute orientation immediately prior to the small-group session.

(Van Zuilen M, Caralis P, and Granville L. Breaking bad news: a small group session teaching communication skills for delivering bad news. MedEdPORTAL; Publication 9604; November 13, 2013.)

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